

Title (en)

MASS SPECTROMETER AND ION MOBILITY ANALYSIS DEVICE

Title (de)

MASSENSPEKTROMETER UND IONENMOBILITÄTSANALYSATOR

Title (fr)

SPECTROMÈTRE DE MASSE ET DISPOSITIF D'ANALYSE DE MOBILITÉ IONIQUE

Publication

EP 3249679 B1 20240424 (EN)

Application

EP 15878760 A 20150122

Priority

JP 2015051622 W 20150122

Abstract (en)

[origin: EP3249679A1] An auxiliary electrode 6 which has a cylindrical shape and a reflecting electrode (7) which also has a cylindrical shape are located anterior to a spray flow ejected from an ESI ionization probe (5). An inlet end (8a) of a heated capillary (8) extends into the space between the two electrodes (6, 7). The auxiliary electrode (6) and heated capillary (8) are grounded, while the reflecting electrode (7) is supplied with a direct-current voltage having the same polarity as measurement target ions. As a result, a reflecting electric field which reflects ions originating from sample components as well as charged droplets, being carried by the spray flow, is created within the space between the two electrodes (6, 7), and a focusing electric field for focusing ions onto the inlet end (8a) is also created in an area near the inlet end (8a). The ions originating from sample components are thereby separated from the gas flow and gathered around the inlet end (8a), to be drawn into the heated capillary (8) and sent into a vacuum chamber. Consequently, more ions are subjected to mass spectrometry than in a conventional case, and analysis sensitivity is improved.

IPC 8 full level

H01J 49/16 (2006.01); **G01N 27/623** (2021.01); **H01J 49/06** (2006.01)

CPC (source: EP US)

G01N 27/623 (2021.01 - EP US); **H01J 49/0445** (2013.01 - US); **H01J 49/061** (2013.01 - EP US); **H01J 49/067** (2013.01 - EP US); **H01J 49/165** (2013.01 - EP US)

Citation (examination)

ANONYMOUS: "surround | meaning of surround in Longman Dictionary of Contemporary English | LDOCE", 1 January 2020 (2020-01-01), XP055738433, Retrieved from the Internet <URL:https://www.ldoceonline.com/dictionary/surround> [retrieved on 20201009]

Cited by

GB2590087A; GB2590087B; US11567087B2; US11733247B2

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DOCDB simple family (application)

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